

ABSTRACT

An aluminum-coated structural member includes an Al-Si-Fe alloy layer formed on a steel substrate layer. The alloy layer includes a softer region having a hardness smaller than 5 or equal to a hardness of the steel substrate layer, extends from the surface of the steel substrate layer toward a surface of the alloy layer, over a depth range greater than or equal to 50% of a thickness of the alloy layer. The Al-Si-Fe alloy layer has an oxide weight smaller than or equal to 500 mg/dm².